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How the Great Columbia-Shamrock Yacht Race Will Be Run

From the standpoint of absolute purity, broad disinterestedness, high motive and general interest, no other sport or sporting event can even compare with the international yacht races scheduled for Oct. 3, 5, 7, 9, and 11, outside the harbor of New York. These races represent ideas that must appeal even to the most idealistic citizen. They mean almost as much to the man who has never seen a sailboat as to the enthusiast who takes yachting all winter and sails all summer.

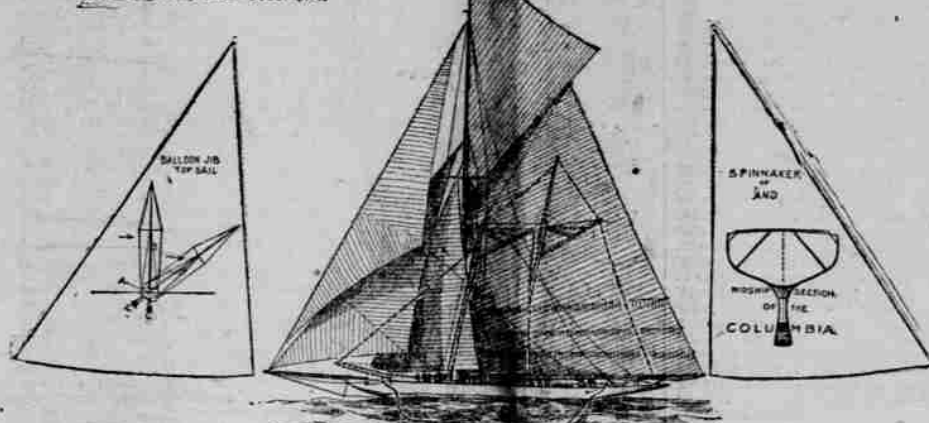
With these races it is not simply a test of skill and speed between two sized yachts. It is a battle of the world against America. Every man who loves his country's supremacy will watch the contest with the keenest interest, for the success or failure of the yacht Columbia will mean the success or failure of American skill over the skill of the world. The Shamrock, the challenger yacht, comes not alone as the representative of Great Britain and Ireland. The trophy she sails for, the American cup, is open to the competition of the world. The German, Russian, French, Dutch and other yachtsmen are about as keenly concerned in the outcome as are the Brit-

ish. All these items must be included in making up the cost of the race. After the race has been sailed the Columbia, if thrown on the market, would probably not fetch over \$10,000 or \$15,000, as she is practically worthless for cruising purposes, having been designed entirely for speed, all idea of comfort being sacrificed. Some of the other items of expense connected with the American side of the race will be the cost of maintaining a fleet of tugs to patrol the course, to serve as stake boats, etc. This will foot up well in the thousands, as the demand for tugs and all other craft will be enormous.

On the British side the cost will be even greater, if anything, than it is on the American side. Sir Thomas Lipton, who built the Shamrock, must do all that Mr. Morgan and his associates have done, besides standing the expense of sailing the challenger across under her own sail.

Some idea of the cost of fitting up the racers may be obtained from the fact that one suit of sails cost in the neighborhood of \$1,000. These sails are specially woven from Egyptian and Sea Island cotton mixed with silk. They cost a dollar a yard. In addition, the

THE ORIGINAL CUP-WINNER AMERICA, COMPARED IN SIZE WITH THE COLUMBIA



Though the Columbia is but Two Feet Longer Than the America on the Water Line, Her Ninety-ton Ballast 20 Feet Below the Water, and Long Overhang, Enable Her to Stand an Enormous Spread of Canvas. The Little Diagram Shows How the Ballast Holds Her Up, A Being the Fulcrum.

that such vessels as the Columbia become flyers as compared with the others. It is then that their lines count, and it is for this that the designers and builders have spent years and years in experimenting, and the owners have spent millions of money in building. It is for work of this class that the vessels are made to draw so much water. Sailing against the wind, or "tacking," involves a peculiar principle of mechanics. Here the wind is pushing one way, and in order to overcome this force and to prevent the vessel from being driven backward, a proportionately large surface must be presented underneath against which the water must push the other way. Under these opposing forces the vessel glides, and it is here that the fine line in which yachtsmen delight count. The finer the lines the greater the speed with which the vessel glides out from the opposing forces.

and this is particularly so in talking of the old America. Her peculiar loyalty to her friends and shipmates is almost pathetic. His love for the yacht they sailed has never waned, and he speaks of her as of a boyhood sweetheart.

A Veritable Water Witch.

"She was a witch in any breeze," he will tell you, "and every one of us fell in love with her the minute we stepped on her deck. It took a dozen men to handle her, not counting Captain Brown, our skipper, and two mates. We were picked from many a locker, but every man knew how to sail a boat. Most of us had been at sea, and the others were old hands at navigating the pilot boats about New York harbor. Captain Brown himself had this berth for many years, and he could sail a yacht with any of these later cranks. He was a good Yankee, and it was due

part of the crew were told off to see that they did not pry too much. In fact, they kept so close that we lost the first races we were in."

This is a feature of the narrative that Captain Hoffman cannot be persuaded to dwell on. "You know," he said, with a wise blink of the eye, "that sometimes you want to pitch a stove overboard when you are getting a sudden squall. The mainsail is as convenient to have spectators about. Well, when the day came for the cup race, we had that boat cleaned from stem to stern. We did this before the English recruits came on board. These chaps never forgot that race. I'll bet you see, twelve men were not enough to handle the boat in a race, and the skipper had six go ashore and hire six Brits, who were turned over for us to watch.

"We didn't like the looks of them very much, and they didn't seem to fancy us. 'We're going to have trouble with these John Bulls,' reported a big quartermaster named Connors. 'Not if you know your business,' replied the captain. One of the crew suggested that the Englishmen be divided up so that not more than two would be together at one station, and this was done. They were thus surrounded and under such vigilance that they could not do anything crooked.

A Yankee Ship Sailed Down the Bay.

"The morning of August 22 broke with a clear sky and soft breeze from the west, and before 10 o'clock fifteen boats of all lengths and sizes, had gathered about us. As the Aurora went by maneuvering, her crew were hoisting the mainsail. When they got aboard a little cockney started up the old song, 'A Yankee Ship Sailed Down the Bay,' and the rest of the crew came in on the chorus. 'Pull, boys, pull, boys, pull,' called one of our men, but the Aurora had passed and did not hear it.

"I fancy I'll need the tow," said one of our English recruits.

"Let me give you some advice," said the second mate, who overheard the remark. "Don't let the skipper hear you say that. The Aurora has passed and did not hear it."

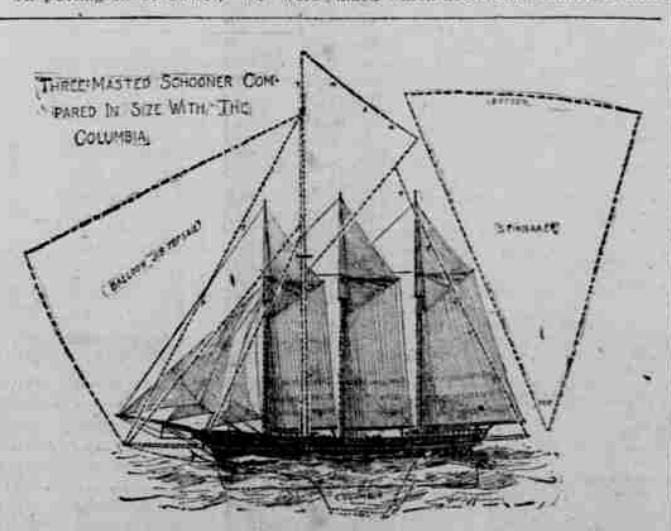
When the signal was given the breeze blew very light, and some of the English boats forced ahead, among them the Aurora. We crowded on every inch of canvas, and not a man of us who did not pray for it to freshen. Word was passed quietly to see that the Englishmen did not shirk. Captain Brown stood the English pilot, for him also we had to take on, as the course round the Isle of Wight was new to us, and we had to rely entirely on the pilot's guidance. Captain Brown watched him like a hawk, but I want to say that he acted on the square with us all the way. With a little freshening we began to pick up, and our good boat soon fairly leaped along. "I say," remarked a Scotchman who was one of the six taken on at Cowes, "do we get some prize money if we win this for you?" "You see that flag up there?" answered the mate, pointing to the stars and stripes. "Well, that's what you're working for. That's our prize money. You see, before that our crew had never thought of the subject, and no one would have mentioned it again if the skipper had not after the race. 'Americans are too damn independent to do this for prize money,' he explained, 'but you've done so well that there's a small divy coming.' As a matter of fact, we each got a few dollars and our passage money home.

America's Weather.

"When the breeze got fresh we simply walked away from everything in sight. The English yachts seemed to be standing still. As we passed the leader at a steamboat speed, the pilot made a remark which afterwards caused trouble.

Yankee Secrecy.

"On putting in at Cowes, we were



In Addition to the Columbia's Ordinary Sail Area (AAA) She Carries a Balloon Jib Topsail and a Spinnaker. With This Additional Area the Difference in Spread of Canvas May Be Seen.

boarded by nearly every small boat in the harbor. Captain Brown had called us all aft before making port, and cautioned us against talking. 'You needn't say anything about our centerboard, nor what we draw,' he said, adding that Mr. Stevens had offered to sail anything in England, and there would be a race. Not a day passed that the deck did not swarm with visitors, and

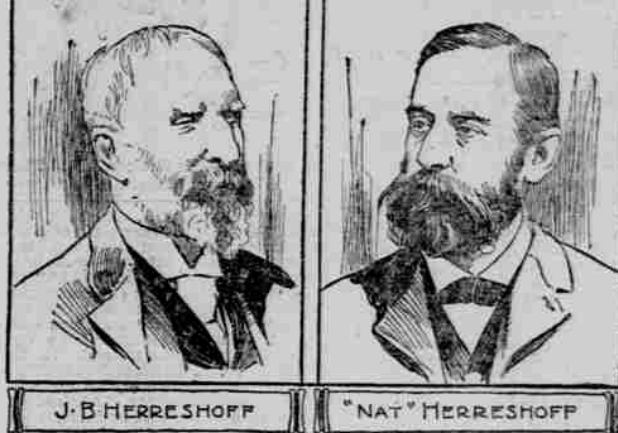
'Captain Brown,' he said, by way of a joke, 'I believe you have a propeller astern.' This was caught up and passed along until the English sailors heard it, and asked if it was true. They would not be convinced otherwise, and after the race spread this report about. Then we were boarded by greater crowds than ever, and were not cleared

of the charge really until the America was put into dry dock. No one could understand how the Aurora was beaten so badly without some device such as this. She finished about half an hour behind us, and this time would have been tripped had not a strong breeze come up after we had crossed the line.

Use of Mainsail.

The principal sail of a sloop is the mainsail (A). It is held in place by the ropes and tackle shown at (B). These ropes are called the sheets, and they are by all odds the most important ropes connected with a yacht. The skill of a yachtsman is based largely on his ability to let out or take in these sheets, thereby giving the sail more or less wind. The speed of the yacht is dependent very largely upon the exactness with which the mainsail is managed. If the wind is behind the boat the sheets will, of course, be eased out until the mainsail stands at a wide angle with the length of the boom, thereby exposing as much surface as possible. In sailing into the wind or "by the wind," as the old seamen say, the sheets are drawn in very close, in other words, the yacht is "close-hauled," so that the mainsail stands almost parallel with the length of the

ing a family of seven sons and two daughters, two of whom, James B. and Nat G., are the organizers of the famous shipbuilding company. Never was there a family more positively touched with genius. John H. Herreshoff, the president of the company, who has been blind now for more than forty years, developed in his early boyhood a genius for invention. Some of the older residents of Bristol tell today about the wonderful Herreshoff churn, which conveyed the milk on the Herreshoff farm at Providence Island into butter. It was the invention of John H. "Captain Nat," as he is called in Bristol, built boats from the time he was a mere boy. At one time he constructed a catamaran, with which he cruised up and down the harbor. It was an odd looking wide craft, with abnormally large sails, and when he first appeared he was the butt of much good-natured raillery. Forthwith he began to issue challenges to races, and, much to the astonishment of every body, he won all the races. And finally, to show what he could do, he sailed down the harbor from Newport, watched for one of the great families of steamers bound up from New York, and, veering into line, bent the steamer into Providence.



J. B. HERRESHOFF

"NAT" HERRESHOFF

The Herreshoff Brothers.

Another of the blind Herreshoffs, Lewis, is an expert swimmer, as well as something of a literary man. I saw him not many days ago wading out into the bay with a flock of little birds. Two of them held to his shoulders and he swam out to a float anchored twenty yards away, and there he taught them to dive. Still another of the blind brothers has become an accomplished musician, and gives lessons in Providence. Two others are experimental chemists, and one lives on the old homestead of the family of the quaint name, Papasquash point, across the harbor from Bristol.

LANGUAGE OF YACHTSMAN.

How One May Understand Descriptions of the Sport.

For lack of twenty simple words, yacht racing to 95 per cent of the people of the United States is a sealed volume. It is true that the language of the yacht, which has as many terrors to the inlander as Sanscrit or Chictaw, has many more than twenty words, but a thorough knowledge of this twenty word vocabulary will transform the story of an international race from a dreary, unintelligible waste of technicalities into a narrative of fire and power. It will make a yachting contest as fascinating as a game of baseball or football, or a horse race. And with a good, clear, accurate knowledge of the language of the yacht, the inlander can stand up to the yachtsman in any craft more pretentious than a ferry boat, and he loses half the keen pleasure of Stevenson, W. Clark Russell, Cooper and many other famous writers of the sea.

The diagram which accompanies this article shows a sloop yacht, or a cutter yacht, as the Englishman would say. A sloop yacht has one mast, the main mast. If a forward mast were added, and the arrangement changed to suit, the vessel would then be called a schooner yacht, or in sea talk, a two-sticker. The great race between the Columbia and the Shamrock is, therefore, a race of sloop yachts. The America, which was the original winner of what is now known as the America cup, was a schooner yacht, but nearly all of the cup contestants since that time have been sloops.



The Herreshoff Homestead, Bristol, Me.

to the pleasure of watching a vessel under sail.

Mother of Herreshoffs.

Across the street from the Herreshoff shipyard in Bristol, where the Defender and the Columbia were built, there stands an old country house with a generous New England "stoop." In front of it there is a row of magnificent trees, and it looks out upon the Bay of Bristol. Sometimes in pleasant weather a little old woman in black comes out to sit on the stoop, and she is a descendant of the famous family of Lewises of Boston, merchants and shipmen, and she brings to the present branch of the family much of its skill as ship designers and builders.

Her husband, Charles Frederick Herreshoff, died thirteen years ago, leaving a family of seven sons and two daughters, two of whom, James B. and Nat G., are the organizers of the famous shipbuilding company. Never was there a family more positively touched with genius. John H. Herreshoff, the president of the company, who has been blind now for more than forty years, developed in his early boyhood a genius for invention. Some of the older residents of Bristol tell today about the wonderful Herreshoff churn, which conveyed the milk on the Herreshoff farm at Providence Island into butter. It was the invention of John H. "Captain Nat," as he is called in Bristol, built boats from the time he was a mere boy. At one time he constructed a catamaran, with which he cruised up and down the harbor. It was an odd looking wide craft, with abnormally large sails, and when he first appeared he was the butt of much good-natured raillery. Forthwith he began to issue challenges to races, and, much to the astonishment of every body, he won all the races. And finally, to show what he could do, he sailed down the harbor from Newport, watched for one of the great families of steamers bound up from New York, and, veering into line, bent the steamer into Providence.

How a Yacht Is Rigged.

So much for the hull of the boat. The backbone of a sloop's rigging is the mainmast, marked (1) in the diagram. This is usually made of the very best and straightest spruce tim-

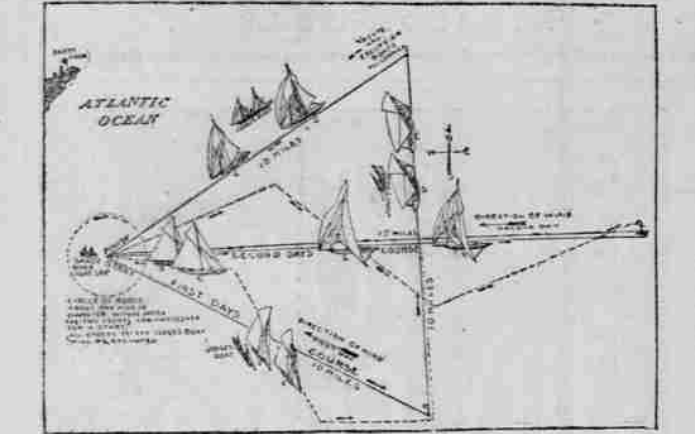


Diagram of Course. The First Will Be a Triangular Course; the Second 15 Miles Straight to Windward and Return. Dotted Lines Show Course Taken to Beat to Windward and Round Stake Boats. The Best 3 Out of 5 Races Will Decide the Fate of the Cup.

ish. Evidence of this is furnished by the news cable recently from the other side to the effect that Emperor William of Germany has detailed the skipper of his racing yacht, the Meteor, to aid the skipper of the Shamrock on the occasion of the international races.

Almost as strong an attraction as the patriotism that the yacht races embody, is the fact that in those contests there is absolutely no taint of commercialism. There is no idea of gain, no gambling.

What the Race Will Cost.

The races will cost the promoters over half a million dollars. For this enormous outlay there is absolutely no return except the satisfaction of promoting the great sport. It is all outlay and no income. There is no "gate," no purse, no "side bet," no anything. It is just sport for sport's sake. On the American side the cost of the contest is borne principally by J. Pierpont Morgan, the great banker, and the commander of the New York Yacht club. Associated with him are C. Oliver Iselin and William Butler Duncan. Mr. Iselin is a member of the millionaire family and has spent hundreds of thousands of dollars for yachting. He ranks as the managing owner of the Columbia, and has full charge of her operations. Mr. Duncan inherited his fortune from the estate of A. T. Stewart, and has spent his income lavishly in the pursuit of yacht racing honors. He is the managing owner of the Defender, which defends the international cup against the Valkyrie III. The Defender has been modernized and fitted up to serve as a pace-maker in the preliminary trial races arranged to test out the Columbia's speed.

To remodel the Defender, put her in commission and handle her will cost Mr. Morgan and Mr. Duncan and the other gentlemen under whose accounts the venture something in the neighborhood of \$50,000, a pretty fair figure for a "trial boat." As a matter of fact, the Defender is almost as fast as the Columbia herself, and, according to the record made on the other side by the Shamrock, the pace-maker might safely be trusted to hold on to the cup.

The cost of the Columbia and her maintenance until after the last race has been sailed will, in round numbers, be about \$150,000, according to experts on the subject. To begin with, the boat cost to build about \$30,000. She carries a crew of thirty men, all high-priced,

yachts carry a spinnaker and other light sails of pure silk, which cost all the way from \$2 to \$4 per yard.

Measured by the amount of money that has been spent in the contests for the American cup, it is without exception the most valuable thing in the world. The crown of the czar of Russia, the richest ornament on earth, with its marvelous diamonds and rubies and other priceless gems, becomes almost a bubble in comparison with this battered old silver cup. The trophy has been fought for ten times, in 1851, 1859, 1875, 1881, 1885, 1886, 1887, 1888 and 1895. In the past, while the cost of preparation and the money spent for all items has not been as great as will be the case this year, the average cost for the ten races will easily foot up \$500,000 for each, or a total of \$5,000,000.

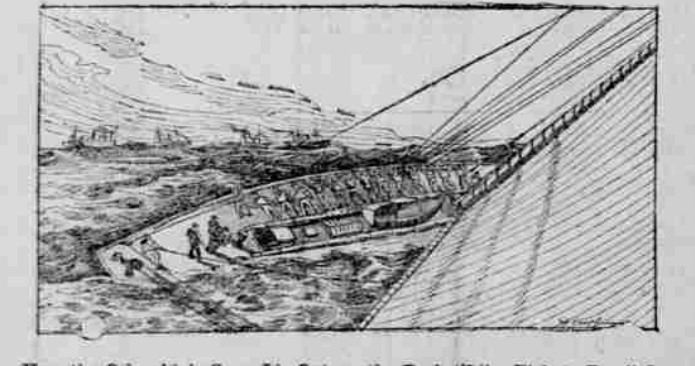
Her Great Sail Area.

The total sail spread of the Columbia is about 14,000 square feet. Cut in strips a foot wide, the sails would stretch nearly three miles in length. Laid flat on the ground, they would cover a good part of a city block, or about one-third of an acre. It is because of this mass of canvas that such a large crew is required on the yachts. No one without experience can appreciate the tremendous task of handling surely and rapidly a sail spread such as the Columbia's.

An ordinary commercial vessel of three times the Columbia's size would carry just about half her sail spread. To carry more would be unprofitable and unsafe from a business standpoint. A 400-ton schooner cannot afford to carry over five or six men and make money. Then, too, it is out of the question for any vessel to carry a spread of sail such as the Columbia's except in smooth water and in a comparatively light wind. A gale coming upon the Columbia with all sails spread would strip her clean in a second. Even with her large crew she could not escape completely lost if she was suddenly overtaken by a high wind.

The power of such a vessel as the Columbia when she has all her canvas set is enormous. Her speed as tested in her recent trials against the Defender is about thirteen knots an hour. To drive a vessel her size at a similar speed under steam would require about 300-horse-power.

Under steam it would be required to do the work that the sails of the Columbia do when she is going with the wind. An engine to drive her at the same speed would



How the Columbia's Crew Life Out on the Deck "Like Fish to Dry," So as Not to Catch Any Wind and Thus Injude the Progress of the Yacht.

picked experts, from the captain down. These men must be quartered outside of the vessel herself, for, like all racers, the Columbia has absolutely no accommodation below deck. She is simply a huge shell 120 feet long and about eight feet deep. Standing on the platform which serves for her deck, one can see through the hatchway right down to her bottom. Inside there is nothing except a series of steel girders and braces. When the races are over, and if her owners choose, the Columbia may be fitted up with cabins. But even if this is the case, all such cabin work, flooring, etc., would be ripped out again as soon as she was ready to enter another race.

Unable to find room on the yacht, her crew are, therefore, quartered aboard a steam tug which accompanies the Columbia wherever she goes. To maintain this tender and to feed the crew alone costs somewhere in the neighborhood of \$25,000. The Defender likewise is equipped with a tender for her crew, the cost of which is little less than that of the Columbia

consume about 550 pounds of coal per hour. This would be a "long ton" for three hours sailing maximum speed, or eight knots per day of twenty-four hours. Allowing twelve days for crossing the sails of a vessel such as the Columbia would have given power equivalent to about 100 tons of coal. There are many other interesting features about these races. Not the least interesting is the fact that with all the vast sums of money spent on perfecting the boats and the crews, there is any number of boats in New York and elsewhere that could easily distance them in a straightaway race before the wind. Both the Columbia and the Shamrock draw about eighteen feet of water. This deep draught creates a proportionate amount of resistance that must be overcome by the sails. A boat drawing only one or two feet of water has little or no resistance to overcome. Naturally, therefore, it could run away from the fastest vessel of the deep draught Columbia at a Shamrock class as long as it was going with the wind. It is when sailing against the wind